

Just-in-Time Training for Point-of-Dispensing (POD) Staff: The NYC Experience

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Overview

- Definition of Just-in-Time (JIT) training
- Overview of NYC's POD layout, operations, and staffing model
- Evolution and components of NYC's JIT training plan
- Results from JIT training completed to date
- Implications for planning and future directions



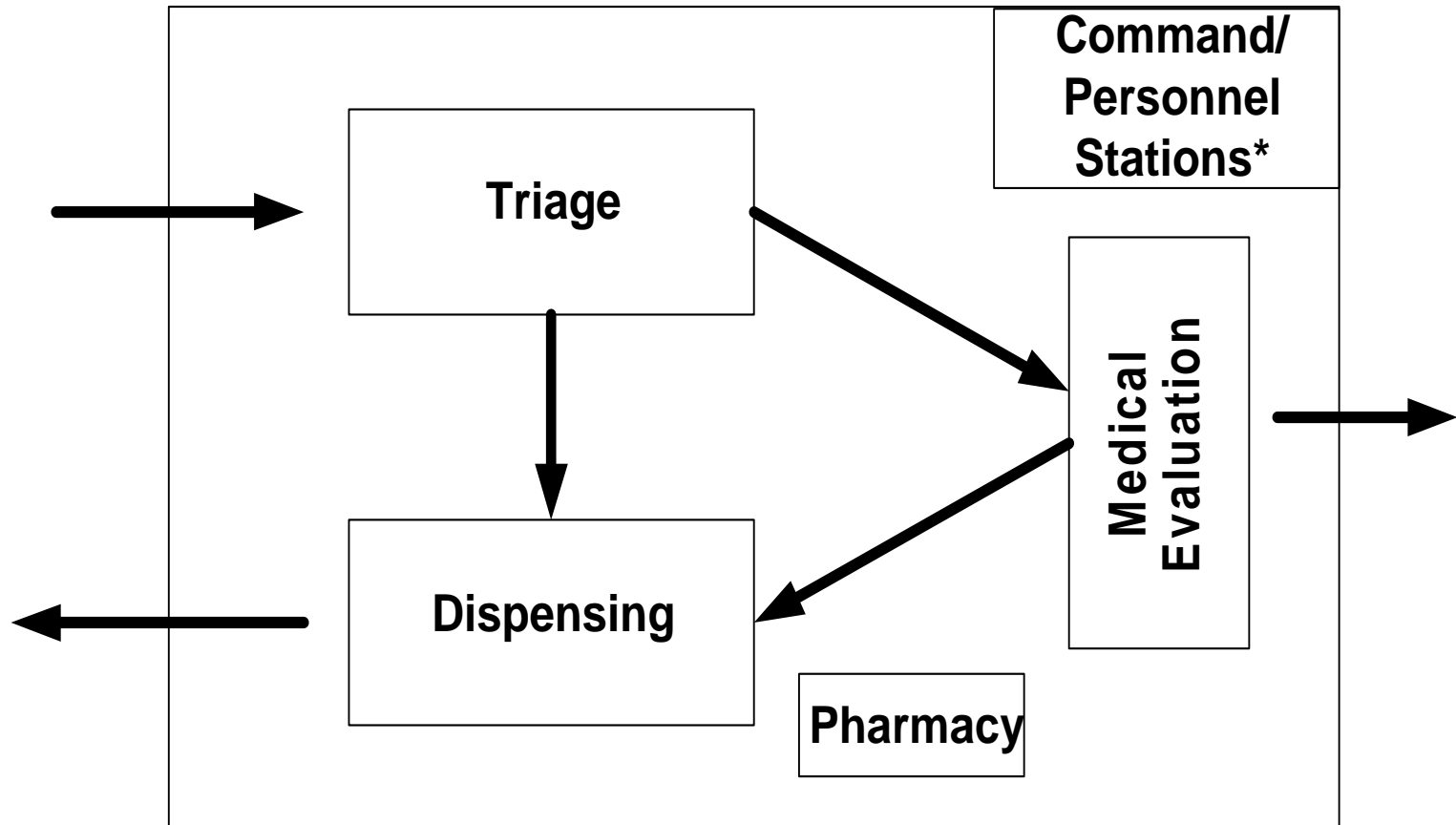
What is “Just-in-Time” (JIT) Training?

- Evolving concept in human resources/training literature
 - “...real time creation of knowledge and solutions that cannot be separated from job function.”¹
- For NYC, JIT Training refers to training that POD staff will receive at time of an emergency

¹Advances in Developing Human Resources Vol. 5, No. 3 August 2003 308-320



NYC POD Layout



*May be outside of the physical POD layout



Triage Station

- Use Triage script to identify individuals who:
 - Have contraindication to available prophylaxis
 - On medication which interacts with prophylaxis
 - Have medical conditions which require dose adjustment of prophylaxis or existing medications
- If any of the above, send patient to **Medical Evaluation**
- If none of the above, send patient to **Dispensing** to receive prophylaxis



Dispensing Station

- Provide antibiotic or vaccine to patients
- Direct public to **Exit**



Medical Evaluation Station

- Evaluate individuals who:
 - Have contraindications to prophylaxis
 - Are on medications which interact with prophylaxis
 - Have medical conditions affecting prophylaxis
- Determine:
 - Which prophylaxis patient should receive/if patient should receive prophylaxis
- Send patient to **Dispensing** or **Exit** as appropriate



Pharmacy Station

- Antibiotic or vaccine is prepared for **Dispensing Station**
 - Re-packaging/color-coding of antibiotic doses
 - Reconstitution of vaccine, as appropriate
- No public interaction



Exit Station

- Provide additional forms if needed, and if available
- Informational signs about prophylaxis will be posted at exits



Flow Monitors

- Direct patients into, through, and out of the POD
- Provide information and/or distribute any available info sheets to patients waiting in line
- Critical to POD operations



Medical Greeters

- Clinicians will be stationed outside of the POD to screen patients and refer persons who may be ill with the disease for which we are providing prophylaxis to a hospital

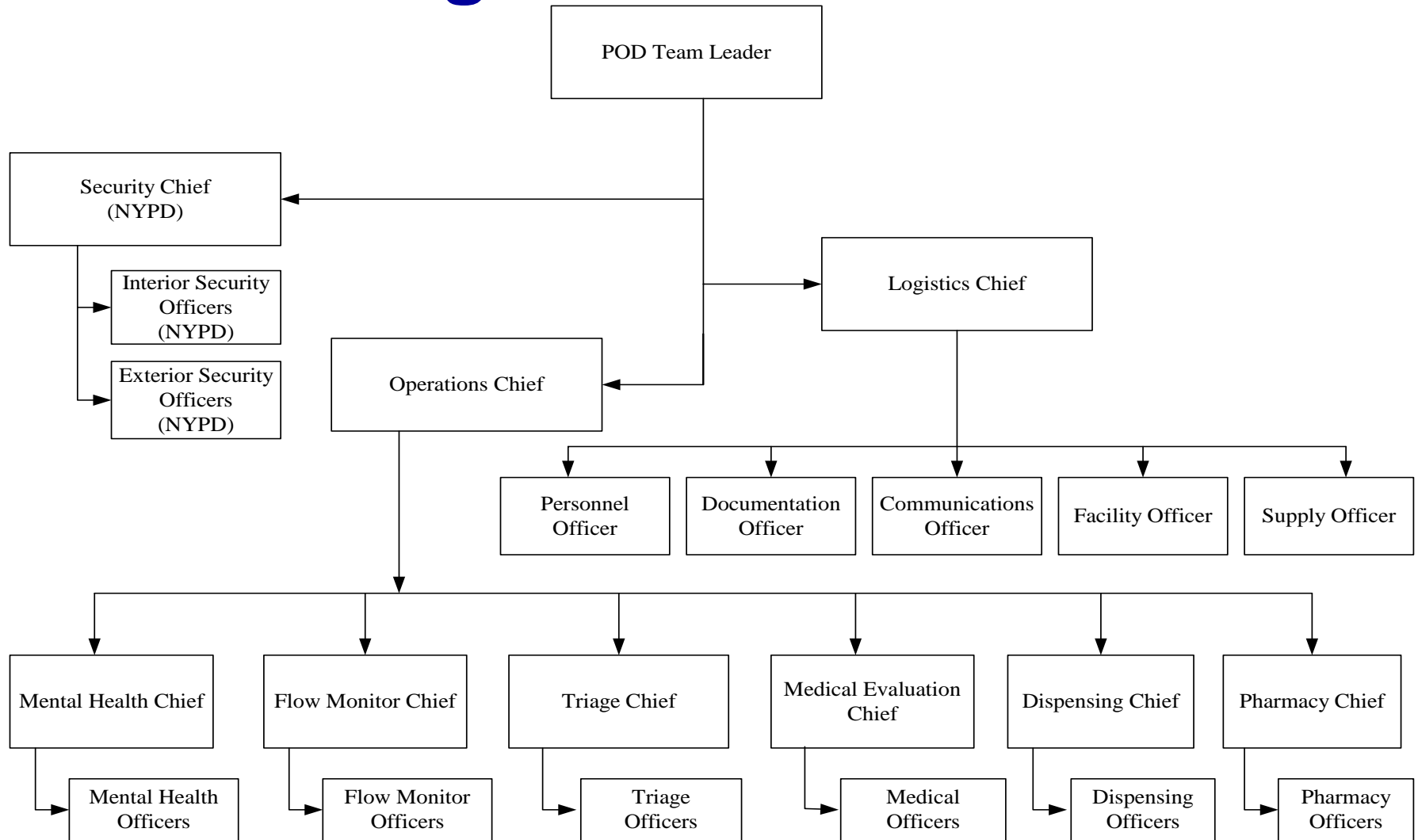


Command/Personnel Stations

- Planning centers of the POD
 - Supplies
 - Phones, faxes, computers for communication
 - Dedicated Personnel Officer to manage staff assignments, breaks, etc.



POD Organizational Structure



Updated 1-20-06

POD Resource Center

- Centralized POD command center
- Staffed and managed by DOHMH staff; located at DOHMH
- All supply, facility, and staffing requests from POD teams to come in to Resource Center
- All data to be reported to, and collected by, Resource Center
 - Supply and staff arrival times
 - Supply and staffing levels
 - Patient flow and throughput during POD operation
 - Significant problems encountered



NYC's JIT Training Plan

- DOHMH employees to make up Core Staff of top 6 leadership positions in POD
 - POD Team Leader, Operations Chief, Logistics Chief, Flow Monitor Chief, Triage Chief, and Medical Evaluation Chief
- Core staff centrally-trained and assigned by DOHMH “Master Trainers” and Assignment Officers
 - Approximately 2.5-3.0 hours



NYC's JIT Training Plan (2)

- Core staff assigns and trains all other staff at POD sites
 - MRC volunteers, spontaneous health professional volunteers, city workers, and non-medical volunteers through MOU with NY Cares
 - Medical volunteers credentialed at 1 of 5 sites (1 per borough)



Core Staff Training-Didactic

- Situation report/briefing
- General POD overview
 - POD layout
 - POD stations and operating procedures
 - POD organizational chart
 - Data collection and reporting protocols



Core Staff Training-Practical

- Role-play triage and medical evaluation scripts
- Review medication prep for Pharmacy Station
 - Color-code antibiotics for easy dispensing
 - Reconstitute vaccine, if necessary
 - Prepare syringes for dispensing, as appropriate



Core Staff Training-Practical (2)

- Review placement of Flow Monitors
- Discuss set-up of each station
- Demonstrate staff prophylaxis procedures
- Practice run-through of “patients” for all staff to watch/ask questions
- Go over general staff assignment protocols for POD sites



Core Staff Responsibilities at POD Site

- Report in to POD Resource Center upon arrival
 - Report arrival times of medical and non-medical supplies, as well
- Ensure proper physical set-up of POD
- Get the POD ready for operation (i.e., place all algorithms on tables, select secure medical supply area, etc.)
- Check ID and assign all volunteers who arrive at POD
- Train all general POD staff



General POD Staff JIT Training: Shift 1

- Arrive at POD site and receive assignment from Personnel Officer
- Report to assigned Station for briefing and training
 - Meet Station Chief and obtain staff identification clothing/materials
 - JIT training conducted by POD Team Leader and/or Station Chiefs
 - Approximately 45 minutes



General POD Staff JIT Training: Shift 1 (2)

- Didactic
 - Situation report/briefing
 - General POD overview
- Practical
 - Role-play triage and medical evaluation scripts
 - Review medication prep for Pharmacy Station
 - Go over placement of Flow Monitors
 - Discuss set-up of each station



General POD Staff JIT Training: Shift 1 (3)

- A few staff members run through POD to role-play patients so that all may watch
- Specific station-related questions addressed by Station Chiefs
- All staff members receive prophylaxis before they begin work
 - Approximately 15-20 minutes



General POD Staff JIT Training:

Shift 2

- Arrive at POD site and receive assignment from Personnel Officer
- Report to Briefing Area for situation report and POD overview
- Report to Station for practical training
 - Meet Station Chief and obtain staff identification clothing/materials
 - Partner with Shift 1 staff member to learn specific role
 - When comfortable, take over from Shift 1 worker



Why JIT Training?

- We will never be able to pre-identify or be able to pre-train all 40,000 staff needed for citywide activation
 - Turnover of DOHMH staff and volunteers leads to loss of knowledge
- Extensive and repetitive pre-training can be costly and time-consuming



Why JIT Training? (2)

- Every staff member would need to be re-trained at the time of the emergency because it is not expected that they will retain the information over long periods of time without constant re-training
 - Scenario-specific information will always need to be provided to staff



Why JIT Training? (3)

- No matter how much pre-training you do, it is unlikely that all of your pre-trained volunteers will be available at the time of an emergency
- Spontaneous volunteers will certainly be used, and you must have a simple and efficient way of training them when they report to assist you



Trainings/Drills Completed to Date

- MRC Trainings (5)
- Citywide drill (4 PODs opened)
- CDC drill (1)
- Trainings with medical students (2)
- DOHMH staff trainings (3)
- Participants alternate between being staff and being patients



Trainings/Drills Completed to Date (2)

- Although these trainings were held with various populations, they all have roughly the same accuracy rate
- Each also demonstrated that we can provide prophylaxis at the rate of ~1000/hour for antibiotics, and ~550/hour for smallpox vaccine
 - Our plans are based on these throughput numbers



MRC Trainings

- 5 trainings held June 2004-February 2006
 - 3 for antibiotic dispensing; 2 for smallpox vaccination
 - Volunteers play all roles, as per licensures
- Additional POD training for smallpox vaccination planned for Summer 2006



JIT Training Results

POD Staff Prophylaxis Date	MRC Volunteers Smallpox Vaccine June 2004	MRC Volunteers Smallpox Vaccine March 2005	MRC Volunteers and Hospital-Based Providers Antibiotics June 2005	MRC Volunteers Antibiotics Feb 2006
Total Patients Seen	527	349	401	295
Uncomplicated	376 (71%)	278 (80%)	371 (93%)	273 (93%)
Correct	359 (95%)	277 (99%)	360 (97%)	264 (97%)
Incorrect	17 (5%)	1 (1%)	11 (3%)	9 (3%)
Complicated	151 (29%)	71 (20%)	30 (7%)	22 (7%)
Correct	127 (84%)	31 (44%)	27 (90%)	16 (73%)
Incorrect	24 (16%)	40 (56%)	3 (10%)	6 (27%)
Correctly Triage	93%	88%	97%	95%



PODEX Citywide Drill

- 4 PODs opened simultaneously in Queens, NY-June 2005
 - DOHMH Medical-Clinical IMS section staffed leadership positions (Core Teams)
 - MRC staffed Medical Evaluation and Pharmacy Stations
 - NY Cares and Red Cross volunteers, as well as CERT teams, staffed all other positions, including Triage
 - Train-the-Trainer model used for 3 of 4 PODs



JIT Training Results (2)

POD Staff Prophylaxis Date	POD A MRC, DOHMH staff, and non- medical volunteers Antibiotics June 2005	POD B MRC, DOHMH staff, and non-medical volunteers Antibiotics June 2005	POD C MRC, DOHMH staff, and non- medical volunteers Antibiotics June 2005	POD D MRC, DOHMH staff, and non- medical volunteers Antibiotics June 2005
Total Patients Seen	687	125	776	221
Uncomplicated	601 (87%)	114 (91%)	709 (91%)	197 (89%)
Correct	583 (97%)	104 (91%)	693 (98%)	183 (93%)
Incorrect	18 (3%)	10 (9%)	16 (2%)	14 (7%)
Complicated	86 (13%)	11 (9%)	67 (9%)	24 (11%)
Correct	65 (76%)	5 (45%)	42 (63%)	17 (71%)
Incorrect	21 (24%)	6 (55%)	25 (37%)	7 (29%)
Correctly Triage	94%	87%	95%	90%



CDC Drill

- POD drill held April 2004 at NYU College of Dentistry
 - SNS receipt, storage and staging-focused drill to which we added a POD
- DOHMH public health nurses staffed Triage
- Dental faculty members staffed Medical Evaluation
- Dental students staffed all other roles



JIT Training Results (3)

<p>POD Staff Prophylaxis Date</p>	<p>NYU Dental Students and Faculty and School Health Nurses Antibiotics April 2004</p>
Total Patients Seen	269
Uncomplicated	199 (74%)
Correct	195 (98%)
Incorrect	4 (2%)
Complicated	70 (26%)
Correct	47 (67%)
Incorrect	23 (33%)
Correctly Triaged	90%



Trainings with Medical Students

- Mt. Sinai School of Medicine-March 2004
- SUNY Downstate Medical School-October 2004
- Medical students staffed all positions



JIT Training Results (4)

POD Staff Prophylaxis Date	Mt. Sinai Medical Students Antibiotics March 2004	SUNY Downstate Medical Students Antibiotics October 2004
Total Patients Seen	324	484
Uncomplicated	199 (61%)	349 (72%)
Correct	187 (94%)	342(98%)
Incorrect	12 (6%)	7 (2%)
Complicated	125 (39%)	135 (28%)
Correct	113 (90%)	119 (88%)
Incorrect	12 (10%)	16 (12%)
Correctly Triage	92%	95%



DOHMH Staff Trainings

- School Health physicians and nurses-April 2004
 - Physicians staffed Medical Evaluation; nurses staffed all other positions
- Bureau of TB clinical staff-June 2004
 - Physicians staffed Medical Evaluation; balance of clinic team members staffed all other positions



JIT Training Results (5)

POD Staff Prophylaxis Date	School Health Physicians and Nurses Smallpox Vaccine April 2004	DOHMH TB Clinical Staff Antibiotics June 2004
Total Patients Seen	242	321
Uncomplicated	184 (76%)	258 (80%)
Correct	182 (99%)	245 (95%)
Incorrect	2 (1%)	13 (5%)
Complicated	58 (24%)	63 (20%)
Correct	49 (84%)	54 (86%)
Incorrect	9 (16%)	9 (14%)
Correctly Triaged	95%	93%



Flu POD Drill-November 2005

- Tested procedures and transition time for a shift change
 - “Train-the-trainer” model used for second shift workers
 - Received briefing and assignment, then watched staff member they were relieving do their job, taking over when ready
- Evaluated worker comfort level regarding: instructions, energy level, ability to perform function based on shift change and suggestions for improvement
- With POD adequately staffed, patient flow ~410/hour
 - Multiple patient forms that we would not have during citywide event



Most Common Mistakes Observed

- Confusion between side effects and allergies
 - Some true allergies not recognized (e.g., hives)
 - Some side effects incorrectly treated as allergies (e.g., GI upset)
- For antibiotic dispensing, children are sometimes incorrectly given doxycycline



Implications for Planning

- Results from the JIT trainings conducted among varied populations to date demonstrate that medical and non-medical people may be trained to staff PODs if algorithms are simple and straight-forward and training method used is successful at communicating information



Implications for Planning (2)

- Ensure that scopes of practice are expanded and/or licensure waivers are in place to allow health professionals enhanced practice capability in the PODs
 - e.g., NY State has drafted an order to expand scopes of practice for dentists, podiatrists, and LPNs to perform the Triage function, which is not normally in their respective scopes of practice
- Draft emergency orders to allow for non-licensed health professionals to perform Triage function
 - Set guidelines for educational status, civil service title, etc.



Implications for Planning (3)

- Must balance need to drill JIT training materials and format with benefits that may be reaped from extensive pre-training of MRC volunteers
 - e.g., training MRC volunteers in POD set-up even though it is not part of the JIT training for general staff



Implications for Planning (4)

- Must continue to hone algorithms after each exercise to ensure that accuracy rate will be as high as possible
 - What common points need to be emphasized for all staff and what extra training, if any, is required for clinicians?
- Must define acceptable level of accuracy
 - Trainings and drills often use higher than normal percentages of complicated patients



Future Directions

- Explore different training models
 - Does every staff member need to be trained in all roles?
 - How much general POD information is necessary for staff, especially Shift 2 workers?



Future Directions (2)

- Exercise different models, including “Train-the-Trainer”
 - DOHMH staff and MRC volunteers
- Continue to refine training materials
- Pre-position Core Staff training materials
 - Training “Go Bags” stored at DOHMH containing all materials and equipment needed to get Core Staff training up and running within 2 hours



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